

SUBSTITUTE FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
8830-24SERIAL NO.
10/049,702

INFORMATION DISCLOSURE STATEMENT

APPLICANT:
Camilo Anthony Leo Selwyn ColacoFILING DATE
April 16, 2002GROUP
1645

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE (IF APPROPRIATE) |
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| | AA | 5,049,646 | 9/17/91 | Tyagi, et al. | 528 | 272 | |
| | AB | 5,561,221 | 10/1/96 | Yoshida, et al. | 530 | 350 | |
| | AC | 5,747,332 | 5/5/98 | Wallen, et al. | 435 | 272 | |
| | AD | 5,843,460 | 12/1/98 | Labigne, et al. | 424 | 234.1 | |
| | AE | 5,961,979 | 10/5/99 | Srivastava | 424 | 193.1 | |
| | AF | 5,981,706 | 11/9/99 | Wallen, et al. | 530 | 350 | |
| | AG | 6,248,330 | 6/19/01 | Labigne, et al. | 424 | 192.1 | |
| | AH | 6,368,599 | 4/9/02 | Langermann, et al. | 424 | 184.1 | |
| | AI | 6,410,028 | 6/25/02 | Srivastava | 424 | 193.1 | |
| | AJ | 6,447,781 | 9/10/02 | Srivastava | 424 | 193.1 | |
| | AK | 6,455,503 | 9/24/02 | Srivastava | 514 | 21 | |
| | AL | 6,500,434 | 12/31/02 | Langermann, et al. | 424 | 197.11 | |
| | AM | 6,576,244 | 6/10/03 | Weltzin, et al. | 424 | 234.1 | |
| | AN | 6,872,542 | 3/29/05 | Hultgren, et al. | 435 | 7.32 | |
| | AO | 6,913,750 | 7/5/05 | Hultgren, et al. | 424 | 190.1 | |
| | AP | 6,962,791 | 11/8/05 | Hultgren, et al. | 435 | 7.37 | |
| | AQ | 7,041,465 | 5/9/06 | Hultgren, et al. | 435 | 7.32 | |
| | AR | 2003/0082242 | 5/1/03 | Rodriguez-Kabana | 424 | 600 | |
| | AS | 2003/0099665 | 5/29/03 | Langermann, et al. | 424 | 190.1 | |

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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| | AT | 2003/0165516 | 9/4/03 | Srivastava | 424 | 185.1 | |
| | AU | 2003/0211102 | 11/13/03 | Tiwari | 424 | 145.1 | |
| | AV | 2003/0216315 | 11/20/03 | Nicchitta, et al. | 514 | 12 | |
| | AW | 2004/0022796 | 2/5/04 | Srivastava | 424 | 185.1 | |
| | AX | 2004/0047879 | 3/11/04 | Tian, et al. | 424 | 189.1 | |
| | AY | 2004/0052812 | 3/18/04 | Hoe, et al. | 424 | 186.1 | |
| | AZ | 2005/0232946 | 10/20/05 | Colaco | 424 | 199.1 | |

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| | | | | | | | YES | NO |
| | BA | WO 90/02564 | 3/22/90 | PCT | A61K | 39/005 | | |
| | BB | WO 96/40928 | 12/19/96 | PCT | C12N | 15/31 | | |
| | BC | WO 97/10002 | 3/20/97 | PCT | A61K | 39/385 | | |
| | BD | WO 00/10597 | 3/2/00 | PCT | A61K | 39/00 | | |
| | BE | WO 01/13944 | 3/1/01 | PCT | A61K | 39/00 | | |
| | BF | WO 01/63278 | 8/30/01 | PCT | G01N | 33/50 | | |

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| | BG | Bae, et al., "Mice immune responses to <i>Brucella abortus</i> heat shock proteins Use of baculovirus recombinant-expressing whole insect cells, purified <i>Brucella abortus</i> recombinant proteins, and a vaccinia virus recombinant as immunogens" <i>Veterinary Microbiology</i> 88 (2002) 189-202 |
| | BH | Bowie, et al., "Deciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions", <i>Science</i> , vol. 247: 1306-1310, 1990 |
| | BI | Buchmeier, et al., "Induction of Salmonella Stress Proteins upon Infection of Macrophages", <i>Science</i> , Vol. 248, No. 4956 (May 11, 1990), pp. 730-732 |
| | BJ | Deepe, et al., "Cellular and Molecular Regulation of Vaccination with Heat Shock Protein 60 from <i>Histoplasma capsulatum</i> ", <i>Infection and Immunity</i> , July 2002, p. 3759-3767, vol. 70, no. 7 |
| | BK | Del Giudice, et al., "Priming to Heat Shock Proteins in Infants Vaccinated against Pertussis", <i>The Journal of Immunology</i> , Vol. 150, 2025-2032, No. 5, March 1, 1993 |

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| BL | Ding, et al., "Complexes between Chaperonin GroEL and the Capsid Protein of Bacteriophage HK97", <i>Biochemistry</i> 1995, 34, 14918-14931 |
| BM | Eschweiler, et al., "In situ Localization of the 60 k Protein of Helicobacter pylori, which Belongs to the Family of Heat Shock Proteins, by Immuno-electron Microscopy", <i>Internal Journal of Medical Microbiology, Virology, Parasitology and Infectious Diseases</i> , Vol. 280, 73-85 (1993) |
| BN | Evans, et al., "Urease-Associated Heat Shock Protein of <i>Helicobacter pylori</i> ", <i>Infection and Immunity</i> , Vol. 60, No. 5, p. 2125-2127, May 1992 |
| BO | Fayet, et al., "The groES and groEL Heat Shock Gene Products of <i>Escherichia coli</i> Are Essential for Bacterial Growth at All Temperatures", <i>Journal of Bacteriology</i> , Vol. 17, No. 3, Mar. 1989, p. 1379-1385 |
| BP | Fernandez, et al., "Elevated Levels of <i>Legionella pneumophila</i> Stress Protein Hsp60 Early in Infection of Human Monocytes and L929 Cells Correlate with Virulence", <i>Infection and Immunity</i> , Vol. 64, No. 6, June 1996, p. 1968-1976 |
| BQ | Ferrero, et al., "The GroES homolog of Helicobacter pylori confers protective immunity against mucosal infection in mice", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 92, pp. 6499-6503, July 1995 |
| BR | Greenspan, et al., "Defining epitopes: It's not as easy as it seems", <i>Nature Biotechnology</i> , Vol. 17, October 1999, 936-937 |
| BS | Hechard, et al., "Molecular cloning of the Chlamydomonas abortus groEL gene and evaluation of its protective efficacy in a murine model by genetic vaccination", <i>Journal of Medical Microbiology</i> , (2004), 53, 861-868 |
| BT | Jindal, et al., "Stress responses to viral infection", <i>Trends in Microbiol</i> , 2: 89-91, 1994 |
| BU | Lamiet, et al., "The <i>Escherichia coli</i> heat shock proteins GroEL and GroES modulate the folding of the β -lactamase precursor", <i>The EMBO Journal</i> , vol. 9, no. 7, pp. 2315-2319, 1990 |
| BV | Leclercq, et al., "Induction of a Th1-type of immune response but not protective immunity by intramuscular DNA immunization with <i>Brucella abortus</i> GroEL heat-shock Gene", <i>J. Med. Microbiol.</i> - vol. 51 (2002), 20-26 |

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| | BW | Lodish, et al., "Polypeptides Can Be Chemically Analyzed and Synthesized", <i>Molecular Cell Biology</i> , 3 rd ed., <i>Scientific American Books</i> , NY, 1995, p. 59 |
| | BX | Motohashi, et al., "Heat-inactivated proteins are rescued by the DnaKJ-GrpE set and ClpB chaperones", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 96, pp. 7184-7189, June 1999 |
| | BY | Murray, et al., "Mechanisms of Viral Pathogenesis", <i>Medical Microbiology</i> , 4 th ed., Mosby 2002, pp. 429-434 |
| | BZ | Narberhaus, "Negative regulation of bacterial heat shock genes", <i>Molecular Microbiology</i> , (1999) 31(1), 1-8 |
| | CA | Noll, et al., "Immunity against <i>Yersinia enterocolitica</i> by Vaccination with <i>Yersinia</i> HSP60 Immunostimulating Complexes or <i>Yersinia</i> HSP60 plus Interleukin-12", <i>Infection and Immunity</i> , Vol. 64, No. 8, Aug. 1996, p. 2955-2961 |
| | CB | Phipps, et al., "A novel ATPase complex selectively accumulated upon heat shock is a major cellular component of thermophilic archaebacteria", <i>The EMBO Journal</i> , vol. 10, no. 7, pp. 1711-1722, 1991 |
| | CC | Rambukkana, et al., "Identification and Characterization of Epitopes Shared between the Mycobacterial 65-Kilodalton Heat Shock Protein and the Actively Secreted Antigen 85 Complex: Their In Situ Expression on the Cell Wall Surface of <i>Mycobacterium leprae</i> ", <i>Infection and Immunity</i> , Vol. 60, No. 11, Nov. 1992, p. 4517-4527 |
| | CD | Sedger, et al., "Heat Shock Response to Vaccinia Virus Infection", <i>Journal of Virology</i> , Vol. 68, No. 7, July 1994, p. 4685-4689 |
| | CE | Sparrer, et al., "Catalysis of protein folding by symmetric chaperone complexes", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 94, pp. 1096-1100, February 1997 |
| | CF | Stewart, et al., "Heat-shock proteins and the host-pathogen interaction during bacterial infection", <i>Current Opinion in Immunology</i> , 2004, 16: 506-510 |

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| | CG | Szabo, et al., "The ATP hydrolysis-dependent reaction cycle of the <i>Escherichia coli</i> Hsp70 system – DnaK, DnaJ, and GrpE", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 91, pp. 10345-10349, October 1994 |
| | CH | Tomioka, "Adjunctive Immunotherapy of Mycobacterial Infections", <i>Current Pharmaceutical Design</i> , 2004, 10, 3297-3312 |
| | CI | Turner, et al., "Lack of Protection in Mice and Necrotizing Bronchointerstitial Pneumonia with Bronchiolitis in Guinea Pigs Immunized with Vaccines Directed against the hsp60 Molecule of <i>Mycobacterium tuberculosis</i> ", <i>Infection and Immunity</i> , Vol. 68, No. 6, June 2000, p. 3674-3679 |
| | CJ | Wawrzynow, et al., "The ClpX heat-shock protein of <i>Escherichia coli</i> , the ATP-dependent substrate specificity component of the ClpP-ClpX protease, is a novel molecular chaperone", <i>The EMBO Journal</i> , vol. 14 no. 9 pp. 1867-1877, 1995 |
| | CK | Wilson, et al., "Transient expression of bacterial gene fragments in eukaryotic cells: implications for CD8+ T cell epitope analysis", <i>Journal of Immunological Methods</i> 234 (2000) 137-147 |
| | CL | Yokota, et al., "Heat Shock Protein Produced by <i>Helicobacter pylori</i> ", <i>Microbiol. Immunol.</i> , 38(5), 403-405, 1994 |
| | CM | Zeilstra-Ryalls, et al., "The Universally Conserved GroE (Hsp60) Chaperonins", <i>Annu. Rev. Microbiol.</i> , 1991, 45: 301-25 |
| | CN | Zugel, et al., "Role of Heat Shock Proteins in Protection from and Pathogenesis of Infectious Diseases", <i>Clinical Microbiology Reviews</i> , Vol. 12, No. 1, Jan. 1999, p. 19-39 |
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